

DRAFT

Bay-Delta Standards

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Contained in D-1641 and the Winter-Run and Delta Smelt Biological Opinions

CRITERIA	Jul 00	Aug 00	Sep 00						
FLOW/OPERATIONAL									
Fish and Wildlife									
SWP/CVP Export Limits									
Export/Inflow Ratio	65% of Delta Inflow								
Minimum Outflow - mon.	8,000 cfs	4,000 cfs	3,000 cfs						
- 7 day avg.	6,400 cfs	3,000 cfs	2,000 cfs						
Suisun Marsh									
Habitat Protection Outflow, X2									
River Flows:									
@ Rio Vista - min. mon. avg.			3,000 cfs						
- 7 day average			2,000 cfs						
Salmon Migration	3,000 cfs	1,000 cfs	5,000 cfs						
@ Vernalis: Base -min. mon. avg.	·		,						
- 7 day average									
Delta Cross Channel Gates									
WATER QUALITY STANDARDS									
Municipal and Industrial									
All Export Locations		Cl <= 250 mg/l							
Contra Costa Canal		Cl <= 150 mg/l for 240 days (196 days as of 7/25/00)							
Agriculture									
Western/Interior Delta	14-dm <= 0.45 mS/cm EC								
Southern Delta	30-day running average EC <= 0.7 mS								
Fish and Wildlife									
San Joaquin River Salinity									
Suisun Marsh Salinity									
LEGEND									
Implemented under ESA Biological Opinions for Winter-Run Salmon and Delta Smelt		Water Year Classification: (May 1 forecast)							
Implemented under SWRCB Order 95-6		SRI (40-30-30 @ 50%) =9.2 (Wet)							
Implemented under SWRCB D-1641		SJV (60-20-20 @75%) =3.2 (Above Normal)							

Year 2	2000 CV	P and SWP	Water 9	Supply	Impa	ct and	Recov	ery Pl	an		
		Based on May 1 - 90% Exceedence Hydrology								Impact	
	Apr	May 1-15 May 16-3	1 Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-01	Summary
			S	SWP							
			b(2) -	WQCP							
SWP Export Impacts (b(2) 2000)		-28 ³									-28
SWP delta smelt B.O. Export Impacts	-28 ¹	-32 ¹ -28 ¹	3								-88
SWP Export Makeup (b(2) 2000)			28 5								28
SWP delta smelt B.O. Export Makeup			52 ⁵	7 ⁶	20 7	9 ⁷					88
Oroville Storage Changes	28 ²	13 ² 33 ⁴	4 5	-7 ⁷	-20 ⁷	-9 ⁷					42
Net Impacts											42
SWP Export from AFRP					?	?		?			?
Negotiated 1999 SWP Makeup							35 ⁸	35 ⁸			70
	<u> </u>			•							
				CVP							
			b(2) -	WQCP							
Cum. CVP Storage Changes (Oct - Jan)											-6
CVP Flow Impacts (FebSep)	-51	-7	3	0	-36	-28					-143
CVP Export Impacts	-52	-78	0	-1	-6	0					-280
Sub total											-429
			WQC	P - Base		1					
Cum. CVP Storage Changes (Oct - Jan)											0
CVP Flow Impacts (FebSep)	-164	-137	-13	0	74	78					-137
CVP Export Impacts	-19	-25	6	0	-95	-102					-235
Sub total											-372
Grand Total											-801
		CVP W	ater Supply	Augmentati	on Action	s					
Potential Use for JPOD											0
Water Purchases south of the Delta				44	19	10					73

¹ Impacts for dropping SWP exports from 50% of Vernalis base flow (2367 cfs) to actual exports (1404 cfs) which averaged greater than the SWP share of the delta smelt biological opinion export objective (1165 cfs). Therefore there were no SWP impacts attributed to b(2) during the pulse flow period.

² Most of the reduced SWP exports were backed into Oroville. Approximately 19 taf of impact occurred during a period of surplus flows, (May 9 - 15), and were not backed upstream.

³ 56 taf of surplus flow was lost due to curtailments in the latter part of May. 28 taf was for a b(2) action. The other 28 taf was for export reductions associated with exceeding the delta smelt red-light salvage level.

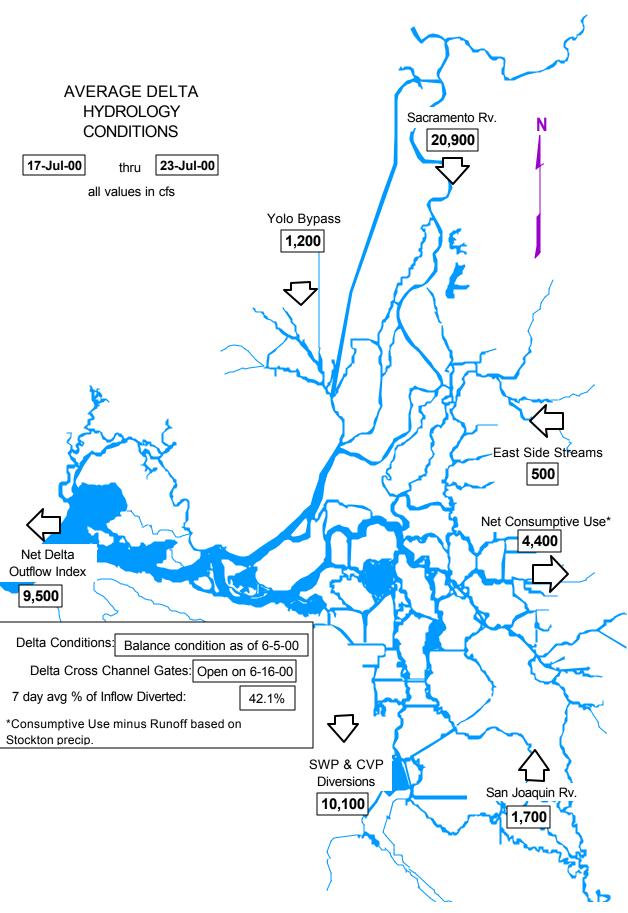
⁴ Some water was backed into Oroville in late May as result of the reduced pumping.

⁵ May b(2) impacts (28 taf), late May ESA impacts (28 taf) and some of the pulse flow period impacts (24 taf) were made up by pumping surplus CVP flows that resulted from CVP b(2) export curtailments in early June and by pumping greater than 35% E/I ratio (15 taf) in the end of June.

⁶ Approximately 7 taf of additional pulse flow export impact has been recovered in July by utilizing the 500 cfs increase at CCF intake. These additional exports are supported by additional Oroville releases of 7 taf plus an undetermined carriage water cost.

⁷ The remainer of pulse flow export impact (34 taf) is planned to be made up by utilizing the 500 cfs increase in August and September. These additional exports will be supported by additional Oroville releases that will include an undetermined amount of carriage water.

⁸ Additional SWP export supported by CVP upstream releases in October and November. The 70 taf was negotiated between DOI and DWR for 1999 make up. Special Note: CVP b(2) impact summary is for the period Oct. '99 through Sept. '00.



Delta Smelt Impact and Recovery

